REMARKS/ARGUMENTS

This is responsive to the Office Action mailed on April 9th, 2004. In the Office Action, the Drawings were objected to under 37 CFR 1.83 (a), the Specification was objected to for certain informalities, Claims 36 and 37 were objected to for certain informalities, Claim 43 was rejected under 35 USC 112, first paragraph, Claims 36-44 were rejected under 35 USC 102 (e), and Claims 36-42 and 44 were rejected under 35 USC 102 (b).

Drawings

A new Fig. 11 has been added to overcome the Examiner's objection under 37CFR 1.83 (a). Fig. 11 shows the multiple independently positionable sections 30 with different boundary shapes as recited in claim 41. No new matter has been added.

Fig. 10 has been amended to include a reference numeral 17 for the directional arrow to obviate the drawing rejection under 37 CFR 1.83 (a). The amended drawing shows the rotationally movable sides as recited in claim 43. No new matter has been added.

In view of the foregoing, Applicant respectfully request for withdrawal of the drawings objections.

Specification

In the specification, a new paragraph has been added after paragraph [0019] to provide a brief description of the new Fig. 11.

Paragraph [0028] has been replaced with a rewritten paragraph to include a reference to the element 17 as indicated in the amended Fig. 10.

Paragraph [0029] has been replaced with a rewritten paragraph to include a reference to Fig. 11

and multiple sections 30.

No new matter has been added.

Applicant respectfully traverses the objection to the specification with respect to the term "aperture" to be replaced by "collimator" in paragraph [0027], line 1, page 7. The paragraph described the adjustable geometry aperture and hence the use of the term "aperture" is correct.

Claim Objections

Applicant respectfully traverses the claim objections with respect to claims 36 and 37 for use of "configured to" language. Applicant respectfully submits that "configured to" language is well understood by those skilled in the art, specifically in electrical and mechanical arts and MPEP 2106 does not apply to this language. Further, there is support in the specification on page 8, line 4 which states a specific implementation for synchronization and position coordination "by the stepper motor 20 and drive belt 21, driven by a system controller and a generator."

35 USC 112 First Paragraph Rejections

Applicant respectfully traverses the rejection of claim 43 under 35 USC 112 first paragraph. Applicant respectfully submits that the amended Fig. 10 and the corresponding amended specification adequately satisfy the enablement requirement under 35 USC 112 for the rotationally movable sides.

Claims define allowable subject matter over the applied art

Applicant respectfully traverses the rejection of Claims 36-44 under 35 USC 102(b) as being anticipated by Wofford et al. (US Pat. No. 6,260,999 B1). Applicant also respectfully traverses the rejection of Claims 36-42 and 44 under 35 USC 102(b) as being anticipated by Brown et al. (US Pat. No.5,751,781) and as being anticipated by Liebetruth (US Pat. No.5,377,252).

With respect to Wofford, Applicant respectfully submits that Wofford does not teach or disclose the independent Claims 36, and 44 recitations of (with emphasis added):

36. ...a collimator comprising **an adjustable geometry aperture assembly configured such that an adjustment of the aperture geometry is synchronized with the movement of said radiation source** and coordinated with the radiation source position so as to limit the incident radiation to a predetermined exposure area at said detector.

44. ...**adjusting an aperture by synchronizing the aperture geometry adjustment with the movement of said radiation source**...

For anticipation under 35 USC 102, the reference must teach every aspect of the claimed invention, either explicitly or impliedly.

With respect to claim 36, Wofford does not disclose, teach, or suggest, either explicitly or impliedly, at least the above highlighted recitations of a radiation imaging system, namely the adjustable geometry aperture assembly configured such that an adjustment of the aperture geometry is synchronized with the movement of the radiation source. Similarly, with respect to claim 44, Wofford does not disclose, teach, or suggest, either explicitly or impliedly, at least the above highlighted limitations of a method of radiation imaging, namely adjusting the aperture by synchronizing the aperture geometry adjustment with the movement of the radiation source.

In contrast, Wofford appears to describe a technique for finding an isocentre of an image using a multi-leaf collimator (column 2, lines 39-42 and 50-51). Specifically Wofford teaches acquiring an image by projecting a center leaf of the multi-leaf collimator into the centre of the X-ray field (Fig. 4 and column 2, lines 53-55). Nowhere does Wofford disclose, teach or suggest the synchronization of the aperture geometry with the radiation source. Wofford appears to be completely devoid of any discussion about synchronization or timing either explicitly or impliedly.

With respect to Brown, Brown similarly does not disclose, teach or suggest at least the above highlighted recitations of a radiation imaging system, namely the adjustable geometry aperture assembly configured such that an adjustment of the aperture geometry is synchronized with the movement of the radiation source. Similarly, with respect to claim 44, Brown does not disclose, teach, or suggest, either explicitly or impliedly, at least the above highlighted limitations of a method of radiation imaging, namely adjusting the aperture by synchronizing the aperture geometry adjustment with the movement of the radiation source.

Brown appears to describe a beam deflecting means for deflecting a particle beam in a substantially radial direction with respect to a cylindrical passageway (column 2, lines 50-55). Figs 10-12 appear to describe a radiotherapy system for localization and treatment of tumors. In fact Brown suggests and recommends using a collimator for simply achieving a rectangular beam limiting function in relation to description for Figs 10-12 (column 13, lines 46-47), and Brown elaborates on disadvantages from using a multi-leaf collimator (column 13 lines 48-65). Brown is thus completely devoid of any disclosure, teaching or suggestion for using an adjustable geometry aperture assembly and the technique of using the same as recited in independent claims 36 and 44.

Liebetruth is also completely devoid of any disclosure, teaching or suggestion regarding the radiation imaging system or technique as described in the independent claims 36 and 44 of the Applicants invention. Specifically, with respect to claim 36, Liebetruth does not disclose, teach or suggest either explicitly or impliedly at least the adjustable geometry aperture assembly configured such that an adjustment of the aperture geometry is synchronized with the movement of the radiation source. With respect to claim 44, Liebetruth does not disclose, teach or suggest either explicitly or impliedly the a method of radiation imaging, namely adjusting the aperture by synchronizing the aperture geometry adjustment with the movement of the radiation source.

Liebetruth appears to describe a computer tomography (CT) system for varying a thickness of an X-ray beam corresponding to a rotational angle of the X-ray beam (abstract and column 1, lines 50-54). More specifically the diaphragm plates are adjusted to vary the thickness of the beam corresponding to the amount of attenuation of the beam at predetermined respective angular positions (column 1, lines 59-65). Thus, there is no disclosure, teaching or suggestion for synchronizing the aperture with the movement of radiation source as described by the Applicant's invention in claim 36 and 44.

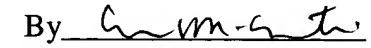
Accordingly, Applicant respectfully submits that independent Claims 36 and 44 define allowable subject matter over the applied art. Claims 37-43 depend directly or indirectly from claim 36 and hence are similarly allowable. Withdrawal of the rejections is respectfully requested, and allowance of the Claims 36-44 is respectfully solicited.

Summary

In view of the foregoing, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and prompt allowance of the application are respectfully requested.

Should the Examiner believe that anything further is needed to place the application in even better condition for allowance, the Examiner is requested to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

By 

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